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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
RAO, MANJUNATH N	
ART UNIT	**PAPER NUMBER**
1652	15

DATE MAILED: 07/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/868,328	RHEE ET AL.	
	Examiner	Art Unit	
	Manjunath N. Rao, Ph.D.	1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 April 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) *1,10-14 and 18-24* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-9 and 15-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 November 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claims 1-24 are still pending in this application. Claims 2-9, 15-17 are now under consideration. Claims 1, 10-14, 18-24 remain withdrawn from consideration as being drawn to non-elected invention.

Election/Restrictions

Applicant's election without traverse of Group II, claims 2-9, 15-17 in Paper No. 13 dated 4-25-03, is acknowledged.

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Drawings Objection

Drawings submitted in this application are accepted by the Examiner for examination purposes only. Figure description is recited in the specification for figure 10. However, the actual figure 10 has not been submitted by the applicants. Correction is required.

Sequence Compliance

Applicant is required to comply with the sequence rules by inserting the sequence identification numbers of all sequences recited within the claims and/or specification. It is particularly noted that applicants do not provide SEQ ID NO to several sequences recited in the specification and in claims. For example see pages 6, 31, 39, 41 and figure descriptions or

figures 3 and 6. Examiner would also like to remind applicants that sequence identification needs to be depicted as follows "SEQ ID NO" and not as "sequence 1" etc. See particularly 37 CFR 1.821(d).

Claim Objections

Claim 2 is objected to because of the following informalities: Claim 2 does not recite the full biological name of the microorganism *A.ureafaciens* K2032. Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 2-5 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 2-5 are drawn to "A novel levan fructotransferase" or "a novel levan fructotransferase gene" both of which read on the product of nature. Amending the claim to recite "An isolated/purified levan fructotransferase...." To show the hand of man would overcome this rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-5, 8-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 2-5, 8-9 recite the phrase "novel levan fructotransferase" and "novel levan fructotransferase gene". This phrase constitutes an opinion by applicant on the merits of the claim and is therefore not considered proper. Deletion of the word novel is suggested.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 recites the phrase "derived from *A.ureafaciens*". The metes and bounds of this phrase is not clear to the Examiner. Literally, while the term "derive" means "to isolate from or obtain from a source", the above term could also mean "to arrive at by reasoning i.e., to deduce or infer" or also as "to produce or obtain from another substance". Therefore, it is not clear to the Examiner either from the specification or from the claims as to what applicants mean by the above phrase. It is not clear to the Examiner whether the "derived from *A.ureafaciens*" a single specific enzyme as in "isolated from *A.ureafaciens*" or whether it encompasses recombinants, variants and mutants of any levan fructotransferase isolated from any source and labeled as "derived from *A.ureafaciens*". As applicants have not provided a definition for the above phrase, Examiner has interpreted the claims broadly to mean, that a "derived from *A.ureafaciens*" encompasses enzymes which are recombinants, variants, or mutants of any levan fructotransferase isolated from any source. Examiner has given the same interpretation while considering the claims for all other rejections.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 recites the phrase :selectively produce "difructose dianyhydride IV". The metes and bounds of the above phrase is not clear to the Examiner. Correction is required.

Claim 3-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 3-5 recite the phrase "base sequence". It is not clear to the Examiner as to what applicants mean by the above phrase. It appears that applicants are referring to nucleotide sequence through this phrase. However, said phrase is confusing specifically in claim 5 wherein both nucleotide and the encoded amino acid sequence are depicted. Therefore, Examiner suggests using the term "polynucleotide" in place of the above phrase.

Claims 3-6 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 3-6 and 15 recite the term "gene" in order to claim cDNA. The use of the above term leads to ambiguity since it is well known in the art that large DNA sequences comprising the full complement of a gene such as the regulatory sequences and introns and exons and 5" and 3" untranslated regions are called "genes" and cDNAs are simply called "polynucleotides". Examiner suggests replacing the above term with "polynucleotides" to render the claim definite. Examiner also suggests applicants to refrain from reproducing the full length sequence information in the claims and replace such data with "SEQ ID NOs".

Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 15 recites the phrase "bacterial species anchoring". The metes and bounds of the above phrase in the context of the above claim is not clear to the Examiner, specifically the term "anchoring". It appears are referring to the "bacteria transformed with an expression vector". If this is so amending the claim accordingly would overcome this rejection.

Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 16 recites the phrase "fructotransferase has histidine residues at its N- or C-terminus". It is not clear to the Examiner whether applicants are referring to the histidines that form the actual amino acid sequence of the enzyme or the external " 6X HIS-tag" that is sometimes added to the N-or C-terminus in order to aid purification of the recombinant protein using an affinity column. Correction is required.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7 and 9 are rejected as the invention appears to employ novel vector and bacterial strain. Since the vector and strain are essential to the claimed invention, they must be obtainable by a repeatable method set forth in the specification or otherwise be readily available to the public. The claimed plasmids' sequences are not fully disclosed, nor have all the sequences

required for their construction been shown to be publicly known and freely available. The enablement requirements of 35 U.S.C. § 112 may be satisfied by a deposit of the plasmid/strain. The specification does not disclose a repeatable process to obtain the vectors and it is not apparent if the DNA sequences are readily available to the public. Accordingly, it is deemed that a deposit of these plasmids should have been made in accordance with 37 CFR 1.801-1.809.

It is noted that applicants have deposited the strain in a Korean Culture Collection, but there is no indication in the specification as to public availability. If the deposit was made under the terms of the Budapest Treaty, then an affidavit or declaration by applicants, or a statement by an attorney of record over his or her signature and registration number, stating that the specific strain has been deposited under the Budapest Treaty and that the strain will be irrevocably and without restriction or condition released to the public upon the issuance of the patent, would satisfy the deposit requirement made herein.

If the deposit has not been made under the Budapest treaty, then in order to certify that the deposit meets the criteria set forth in 37 CFR 1.801-1.809, applicants may provide assurance or compliance by an affidavit or declaration, or by a statement by an attorney of record over his or her signature and registration number, showing that:

1. during the pendency of this application , access to the invention will be afforded to the Commissioner upon request;

2. all restrictions upon availability to the public will be irrevocably removed upon granting of the patent;

3. the deposit will be maintained in a public repository for a period of 30 years or 5 years after the last request or for the effective life of the patent, whichever is longer; and

4. the deposit will be replaced if it should ever become inviable.

Claims 15-17 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a process of making a levan fructotransferase enzyme consisting of SEQ ID NO:1 using a host cell transformed with a expression vector comprising the polynucleotide with SEQ ID NO:2, does not reasonably provide enablement for making any levan fructotransferase of isolated from any or all sources using a host cell transformed with any polynucleotide isolated from any source and encoding a levan fructotransferase. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

Factors to be considered in determining whether undue experimentation is required, are summarized in In re Wands (858 F.2d 731, 8 USPQ 2nd 1400 (Fed. Cir. 1988)) as follows: (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claim(s).

Claims 15-17 are so broad as to encompass the process of making any levan fructotransferase of isolated from any or all sources using a host cell transformed with any polynucleotide isolated from any source and encoding a levan fructotransferase. The scope of the claims is not commensurate with the enablement provided by the disclosure with regard to the extremely large number of enzymes from a large number of sources broadly encompassed by the claims. Since the amino acid sequence of a protein determines its structural and

functional properties, predictability of which changes can be tolerated in a protein's amino acid sequence and obtain the desired activity requires a knowledge of and guidance with regard to which amino acids in the protein's sequence, if any, are tolerant of modification and which are conserved (i.e. expectedly intolerant to modification), and detailed knowledge of the ways in which the proteins' structure relates to its function. However, in this case the disclosure is limited to the nucleotide and encoded amino acid sequence of only one fructotransferase. It would require undue experimentation of the skilled artisan to make and use the claimed polypeptides. The specification is limited to teaching use of SEQ ID NO: 2 as encoding the enzyme with SEQ ID NO:1 and use of such polynucleotides to transform host cells and use it to make recombinant proteins but provides no guidance with regard to the making of any or levan fructotransferases. In view of the great breadth of the claim, amount of experimentation required to make the claimed polypeptides, the lack of guidance, working examples, and unpredictability of the art in predicting function from a polypeptide primary structure (e.g., see Ngo et al. in The Protein Folding Problem and Tertiary Structure Prediction, 1994, Merz et al. (ed.), Birkhauser, Boston, MA, pp. 433 and 492-495, Ref: U, Form-892), the claimed invention would require undue experimentation. As such, the specification fails to teach one of ordinary skill how to use the full scope of the polypeptides encompassed by this claim.

While recombinant and mutagenesis techniques are known, it is not routine in the art to screen for multiple sources, substitutions or multiple modifications, as encompassed by the instant claims, In addition, one skilled in the art would expect any tolerance to modification for a given protein to diminish with each further and additional modification, e.g. multiple substitutions.

The specification does not support the broad scope of the claims which encompass process of making any or all levan fructotransferase because the specification does not establish: (A) regions of the protein structure which may be modified without effecting activity; (B) the general tolerance of fructotransferases to modification and extent of such tolerance; (C) a rational and predictable scheme for modifying any amino acid residue with an expectation of obtaining the desired biological function; and (D) the specification provides insufficient guidance as to which of the essentially infinite possible choices is likely to be successful.

Thus, applicants have not provided sufficient guidance to enable one of ordinary skill in the art to make and use the claimed invention in a manner reasonably correlated with the scope of the claims broadly including enzymes from all or any source. The scope of the claims must bear a reasonable correlation with the scope of enablement (In re Fisher, 166 USPQ 19 24 (CCPA 1970)). Without sufficient guidance, the invention is rendered unpredictable and the experimentation left to those skilled in the art is unnecessarily, and improperly, extensive and undue. See In re Wands 858 F.2d 731, 8 USPQ2nd 1400 (Fed. Cir, 1988).

Claims 15-17 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. These claims are directed to a method of preparing a genus of polypeptides using a genus of polynucleotides.

The specification does not contain any disclosure of the structure of all DNA/polypeptide sequences encompassed by the claims. The genus of DNAs/polypeptides that

comprise these above molecules is a large variable genus with the potentiality of having many different structures . Therefore, many structurally unrelated DNAs/polypeptides are encompassed within the scope of these claims, including partial DNA sequences. The specification discloses only a single species of the claimed genus which is insufficient to put one of skill in the art in possession of the attributes and features of all species within the claimed genus. Therefore, one skilled in the art cannot reasonably conclude that the applicant had possession of the claimed invention at the time the instant application was filed.

Applicant is referred to the revised guidelines concerning compliance with the written description requirement of U.S.C. 112, first paragraph, published in the Official Gazette and also available at www.uspto.gov.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 2 is rejected under 35 U.S.C. 102(a) as being anticipated by Song et al. (SPTREMBL Accession No. Q9KJD0, 10-1-2000). This rejection is based upon the public availability of the amino acid sequence information in a public database prior to the date of application for patent in the United States. Claim 2 of the instant application is drawn to a levan fructotransferase isolated from *A.ureafaciens* having the amino acid sequence depicted in SEQ

ID NO:1, which is capable of hydrolyzing levan to produce difructose dianyhydride IV. Song et al. disclose an amino acid sequence of a levan fructotransferase enzyme that is 100% identical to the amino acid sequence SEQ ID NO:1. Therefore, Song et al. anticipate claim 2 as written.

Claim 2 is rejected under 35 U.S.C. 102(a) as being anticipated by Song et al. (Enz. Microbial Technol., 2000, Vol. 27 :212-218 cited in IDS). This rejection is based upon the public availability of the amino acid sequence information in a public database prior to the date of application for patent in the United States. Claim 2 of the instant application is drawn to a levan fructotransferase isolated from *A.ureafaciens* K2032 having the amino acid sequence depicted in SEQ ID NO:1, which is capable of hydrolyzing levan to produce difructose dianyhydride IV. Song et al. disclose a levan fructotransferase enzyme isolated from the identical strain *A.ureafaciens* K2032 with identical activity. However, the reference dos not disclose the amin oacid sequence. Because the enzyme in the reference and the instant have been isolated from identical source and both enzxymes have identical activities, Examiner takes the position that they are identical. Furthermore, Examiner takes the position that characteristics such as amino acid sequence information of an enzyme is an inherent characteristic and therefore the enzyme nthe reference has an amino acid sequence that is 100% identical to SEQ ID NO:1. Therefore, Song et al. anticipate claim 2 as written.

Since the Office does not have the facilities for examining and comparing applicants' protein with the protein of the prior art, the burden is on the applicant to show a novel or unobvious difference between the claimed product and the product of the prior art (i.e., that the protein of the prior art does not possess the same material structural and functional

characteristics of the claimed protein). See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *In re Fitzgerald* et al., 205 USPQ 594.

Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka (a)et al. (J. Biochem., 1983, Vol. 94(5):1569-1578) and Tanaka (a)et al. (J. Biochem., 1985, Vol. 97(6):1679-88). This rejection is based upon the public availability of a printed publication more than one year prior to the date of application for patent in the United States. Claim 2 of the instant application is drawn to a levan fructotransferase isolated from *A.ureafaciens* having the amino acid sequence depicted in SEQ ID NO:1, which is capable of hydrolyzing levan to produce difructose dianyhydride IV. Tanaka (a) et al. or Tanaka(b) et al. disclose a identical enzyme, a levan fructotransferase isolated from *A.ureafaciens* which is capable of hydrolyzing levan to produce difructose dianyhydride IV. Therefore, Tanaka et al. Anticipate claim 2 as written. The reference does not provide the amino acid sequence SEQ ID NO:1 as the sequence of the isolated enzyme. However, Examiner takes the position that amino acid characteristic is an inherent character of any enzyme. Furthermore, as the enzyme in the reference and the instant enzyme have identical source and activity, Examiner takes the position that the reference enzyme and the instant claimed enzyme are one and the same.

Since the Office does not have the facilities for examining and comparing applicants' protein with the protein of the prior art, the burden is on the applicant to show a novel or unobvious difference between the claimed product and the product of the prior art (i.e., that the protein of the prior art does not possess the same material structural and functional

characteristics of the claimed protein). See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *In re Fitzgerald* et al., 205 USPQ 594.

Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Nippon Oil Company (NIOC) (GenSeq database accession No. AAY04105, 6-10-1999). This rejection is based upon the public availability of a printed publication more than one year prior to the date of application for patent in the United States. Claim 15 of the instant application is drawn to a method of preparation of levan fructotransferase by culturing a transformant, transformed with a expression vector comprising the polynucleotide encoding levan fructotransferase followed by harvesting and homogenizing cells and isolating the expressed enzyme. NIOC disclose an identical method of making the enzyme using transformed cells comprising a vector expressing a levan fructotransferase. Therefore NIOC anticipates claim 15 as written.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over NIOC (GenBank Accession No. AAY04105 6-10-1999) as applied to claim 15 above, and further in view of the common knowledge in the art of molecular biology regarding the purification of

recombinant proteins using Ni-ion affinity chromatography such as that generally taught in laboratory manuals such as Sambrook et al. (Molecular Cloning, A Laboratory Manual, 2nd Ed, ColdSpring Harbor Laboratory Press, 1989, pages 7.37-7.52). Claims 16-17 in this instant application are drawn to the process of making HIS-tagged recombinant levan fructotransferase by recombinant method followed by purification of the recombinant protein using the metal (such as Ni) ion-affinity chromatography.

The reference of NIOC has already been discussed above. It is common knowledge in the art that adding nucleotides encoding 6-8 Histidine amino acids at either of the recombinant protein encoding sequences in an expression vector followed by expressing such recombinant protein in a host cells leads to formation of His-tagged protein. It is also common knowledge that tagged proteins can be easily purified by one single passage through a metal-ion column such as Ni column which adsorbs the His-tagged proteins which can be later eluted out as a homogenous protein by cleaving off the tag. Such teachings are found in common laboratory manuals such as that of Sambrook et al.

With the teaching of NIOC in hand, it would have been obvious to one of ordinary skill in the art to use the common knowledge available in the art to make His-tagged levan fructotransferase and isolate it in a pure form using the metal ion affinity chromatography. One of ordinary skill in the art would be motivated to do so in order to quickly purify the recombinant protein. One of ordinary skill in the art would have a reasonable expectation of success since NIOC provide the recombinant levan fructotransferase and the art provides additional method to tag and purify the recombinant protein.

Therefore the claimed invention would have been *prima facie* obvious to one of ordinary skill in the art.

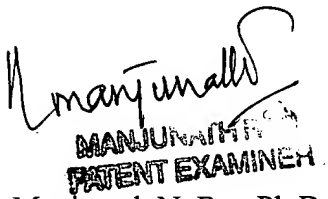
This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Conclusion

None of the claims are allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manjunath Rao whose telephone number is (703) 306-5681. The Examiner can normally be reached on M-F from 7:30 a.m. to 4:00 p.m. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, P.Achutamurthy, can be reached on (703) 308-3804. The fax number for Official Papers to Technology Center 1600 is (703) 305-3014.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.



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6/27/03